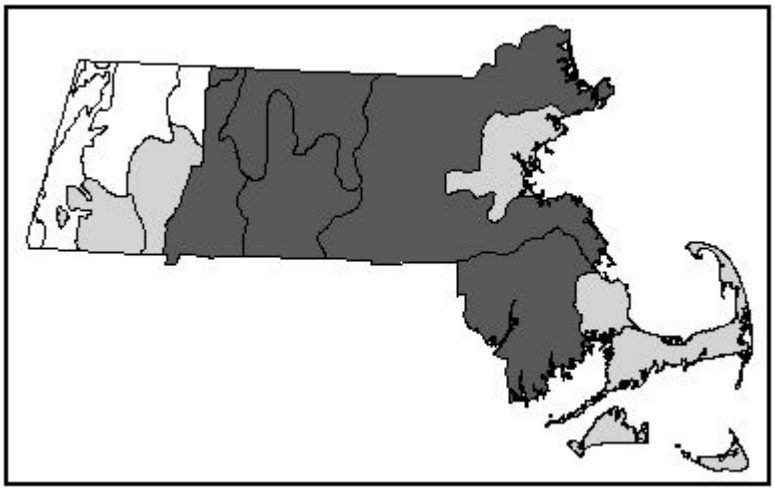
Community Name: **COASTAL ATLANTIC WHITE CEDAR SWAMP**
Community ELCODE: CP1B1A1000
SRANK: S2



Concept: Basin swamps dominated by Atlantic white cedar (*AWC*) in the overstory and a mixture of coastal species in the understory.

Environmental setting: Coastal AWC swamps typically occur at low elevations, less than 40 ft. above sea level, in basins overlying sand and gravel deposits or glacial lake bottom sediments. They are limited to coastal regions of the state. Water-saturated peat overlies the mineral sediments, and standing water generally occurs for half of the growing season or longer. The water and soil are nutrient-poor, and particularly low in nitrogen and phosphorus. There is a high iron content in the soil; the iron, called "bog iron," was mined in the early days of manufacturing. Soil pH is acidic, 3.1-5.5, and leaf litter decomposition is slow.

Vegetation Description: Atlantic white cedar (*Chamaecyparis thyoides*) is the dominant tree mixed with red maple (*Acer rubrum*). Pitch pine (*Pinus rigida*), white pine (*Pinus strobus*), and hemlock (*Tsuga canadensis*) are infrequent associates. These swamps can have a very dense shrub layer, including high bush blueberry (*Vaccinium corymbosum*), swamp azalea (*Rhododendron viscosum*), sweet pepperbush (*Clethra alnifolia*) and fetterbush (*Leucothoe racemosa*). In Cape Cod sites, inkberry (*Ilex glabra*) frequently occurs. The herb layer is sparse and patchy with cinnamon fern (*Osmunda cinnamomea*), Virginia chain fern (*Woodwardia virginica*), starflower (*Trientalis borealis*) and wild sarsaparilla (*Aralia nudicaulis*). The ground layer is dominated by *Sphagnum* spp. mosses.

Associations: Motzkin (1991) described six AWC associations in Massachusetts. Coastal AWC swamps are equivalent to his Coastal AWC Type.

Habitat values for Associated Fauna: Young AWC thickets provide excellent cover for deer, rabbits and birds. Atlantic white cedar foliage and twigs are preferred winter browse for white-tailed deer, while rabbits and mice can feed on cedar seedlings. Although no bird species appear to be restricted to AWC communities, they provide nesting habitat for many species including Red-breasted Nuthatch, Brown Creeper, Black-and -white Warbler and Black-capped Chickadee. Coastal AWC swamps can function as vernal pool habitat if water remains standing for 2-3 months and they lack fish; these areas provide important amphibian breeding habitat.

Associated rare plants:

LISTERA CORDATA	HEARTLEAF TWAYBLADE	E

Associated rare animals:

AMBYSTOMA LATERALE	BLUE-SPOTTED SALAMANDER	SC
CLEMMYS GUTTATA	SPOTTED TURTLE	SC
CRANGONYX ABERRANS	MYSTIC VALLEY AMPHIPOD	SC

From: Swain, P.C. & J.B. Kearsley. 2001. Classification of the Natural Communities of Massachusetts. Version 1.3. Natural Heritage & Endangered Species Program, Division of Fisheries & Wildlife. Westborough, MA.

HEMIDACTYLIUM SCUTATUM	FOUR-TOED SALAMANDER	SC
LITHOPHANE VIRIDIPALLENS	PALE GREEN PINION MOTH	SC
MITOURA HESSELI	HESSEL'S HAIRSTREAK	SC
PARULA AMERICANA	NORTHERN PARULA	T

Examples with Public Access: Marconi AWC Swamp, Cape Cod National Sea Shore, Wellfleet.

Threats: The two greatest threats to AWC swamps are land clearing for agricultural, commercial and residential development, and interference of normal hydrological functioning as a result of development. Atlantic white cedar has been cut extensively for posts and shingles for over three centuries. In an extensive statewide vegetation inventory funded by MNHESP in 1990, no uncut stands were found, but several sites contained cedars that were 100-200 years old. Selective cutting is detrimental to the persistence of AWC swamps, because hardwoods, such as red maple, out-compete and replace AWC. Any alterations to the natural hydroperiod of AWC swamps threatens their persistence.

Management needs: Due to the limited distribution of AWC swamps, it is recommended that no clearing or filling of these wetlands be allowed. Atlantic white cedar will regenerate best following catastrophic disturbance events such as hurricanes and fires. Data suggest that in the absence of disturbance, red maple and shrubs increase in abundance at the expense of Atlantic white cedar. Fire suppression negatively threatens the long-term persistence of AWC swamps, and controlled burning practices may be an appropriate restoration tool in many areas. Controlled burning should be accompanied by small-patch clearcuts to be most effective. By clear-cutting small patches, generally 20 m x 20 m, and removing the slash and competing vegetation, pure, even-aged stands of Atlantic white cedar are able to regenerate. AWC swamps require a natural cycle of wet and dry periods for their survival and reproduction. Standing water for much of the year is unfavorable for both seed germination and seedling survival, and young seedlings are killed by both drowning and drought. It is recommended that any alterations in water levels be avoided, this includes development and road construction in uplands surrounding AWC swamps which can alter water levels. Where cedar wetlands are associated with river systems, it is important to maintain normal hydrologic regime of the river.

Synonyms

USNVC/TNC: Chamaecyparis thyoides/Ilex verticillata forest [CEGL006189]; Chamaecyparis thyoides/Ilex glabra forest [CEGL006188].

MA [old name]: SNE basin swamp, coastal Atlantic white cedar association [CP2B2A1A00].

ME: Atlantic white cedar swamp community.

VT: Not applicable.

NH: Atlantic white cedar basin swamp.

NY: Coastal plain Atlantic white cedar swamp.

CT: Chamaecyparis thyoides/Vaccinium corymbosum community.

RI: Atlantic white cedar swamp, Chamaecyparis thyoides-Acer rubrum-Betula alleghaniensis variant, Chamaecyparis thyoides/Rhododendron viscosum variant.

Golet & Larson, 1974: Evergreen wooded swamp (WS-2).

Other: Motzkin, 1991, Coastal Atlantic white cedar type.

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